

Energy From Waste (EFW) Facility, Eastern Creek

Heritage Impact Statement

Report prepared for Urbis on behalf of The Next Generation (TNG)

June 2014



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Report Register

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1.0 Introduction

1.1 Background

GML Heritage Pty Ltd (GML) was engaged by Urbis, on behalf of The Next Generation NSW Pty Ltd (TNG), to prepare a Heritage Impact Statement (HIS) for the proposed Energy from Waste (EFW) facility at Eastern Creek (Figure 1.1).

The purpose of this report is to assess the potential for historical archaeological values and built heritage values to be present within the study area, in accordance with the principles of *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013* (the Burra Charter) and the NSW Heritage Manual documents: *Assessing heritage significance*; and *Statements of Heritage Impact*, issued by the NSW Heritage Office.

1.2 Site Location

The site (hereafter referred to as 'the study area') is located in Eastern Creek, within the Blacktown Local Government Area (Figure 1.1). The study area is made up of two irregular shaped lots, described as Lot 2 and 3 DP 1145808, and bounded by the M4 motorway to the north, Archbold Road to the west, and the Hanson Wallgrove quarry to the east (Figure 1.2).

1.3 Previous Reports

Archaeological assessments have been carried out in the surrounding area, in particular focusing on Aboriginal heritage. A Historical and Aboriginal Heritage Assessment of Lot 4 DP 262213 to the immediate southwest of the study area was prepared by ERM in 2005. A Heritage Study of Blacktown was undertaken in 1988, which identifies historical themes within the region and a number of heritage structures within the neighbouring lot; however, these were not listed on the Blacktown LEP 1988 and are not covered by the scope of this report.

1.4 Statutory Context

This section outlines the state and local statutory context relevant to the site.

1.4.1 Heritage Act 1977 (NSW)

The *Heritage Act 1977* (NSW) (the Heritage Act) includes a range of provisions for identifying and protecting items of environmental heritage. In addition to the establishment of the State Heritage Register (SHR), which is a list of items assessed as being of State significance, these provisions include Interim Heritage Orders, Orders to Stop Work, Heritage Conservation Registers (Section 170) and 'relics' provisions.

Relics Provisions

The Heritage Act includes a number of provisions concerning archaeological relics. Section 4(1) of the Act (as amended in 2009) defines a relic as:

Any deposit, artefact object or material evidence that

- (a) *relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- (b) *is of State or local heritage significance*

GML Heritage

To assist management of the state's heritage assets, the Heritage Act distinguishes between items of Local and State heritage significance.

- State heritage significance indicates significance to the state in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.
- Local heritage significance indicates significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

Section 139 of the Heritage Act prevents the excavation or disturbance of land known or likely to contain relics, except in accordance with an excavation permit issued by the Heritage Council of NSW (or in accordance with a gazetted exception to this Section of the Heritage Act).

Section 139 of the Heritage Act requires that:

- 1. A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*
- 2. A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*

As all relics are protected under the Heritage Act, an Excavation Permit under Section 140 of the Act, or Section 60 in the case of sites listed on the SHR, needs to be obtained prior to any works that would disturb or destroy them. However, if the proposed works are only minor in nature and will have minimal impact on the heritage significance of the place, they may be granted an Exception under the provisions of Section 139(4) or Standard Exemption under Section 57(2) for the sites listed on the SHR.

Section 140/Section 60 Excavation Permit Applications must be supported by an Archaeological Research Design Report which would address how the significant information embodied in the relics and their contexts is to be managed, conserved and interpreted should approval to remove or disturb them be granted.

In addition, Section 146 of the Heritage Act requires that the discovery of any relic and its location be reported to the Heritage Branch/Council of NSW, regardless of whether an excavation permit has been issued.

The Heritage Council of NSW is the approval authority for issuing excavation permits and considering exceptions and exemptions under Sections 139 and 140 of the Heritage Act.

The subject site has the potential to contain subsurface deposits and features that would be considered relics under the Heritage Act.

1.4.2 Blacktown LEP 1988

The study area contains no heritage items listed on the Blacktown LEP.

1.5 Limitations

This assessment does not consider built heritage values because GML is concurrently preparing an Aboriginal Cultural Heritage Assessment Report for the subject site which will address Aboriginal cultural heritage values and Aboriginal archaeological potential of the study area.

A site inspection has not been carried out at the time of writing this report.

1.6 Authors

This report has been prepared by Jane McMahon, Graduate Consultant; and Natalie Vinton, Senior Associate has provided input and reviewed the report.

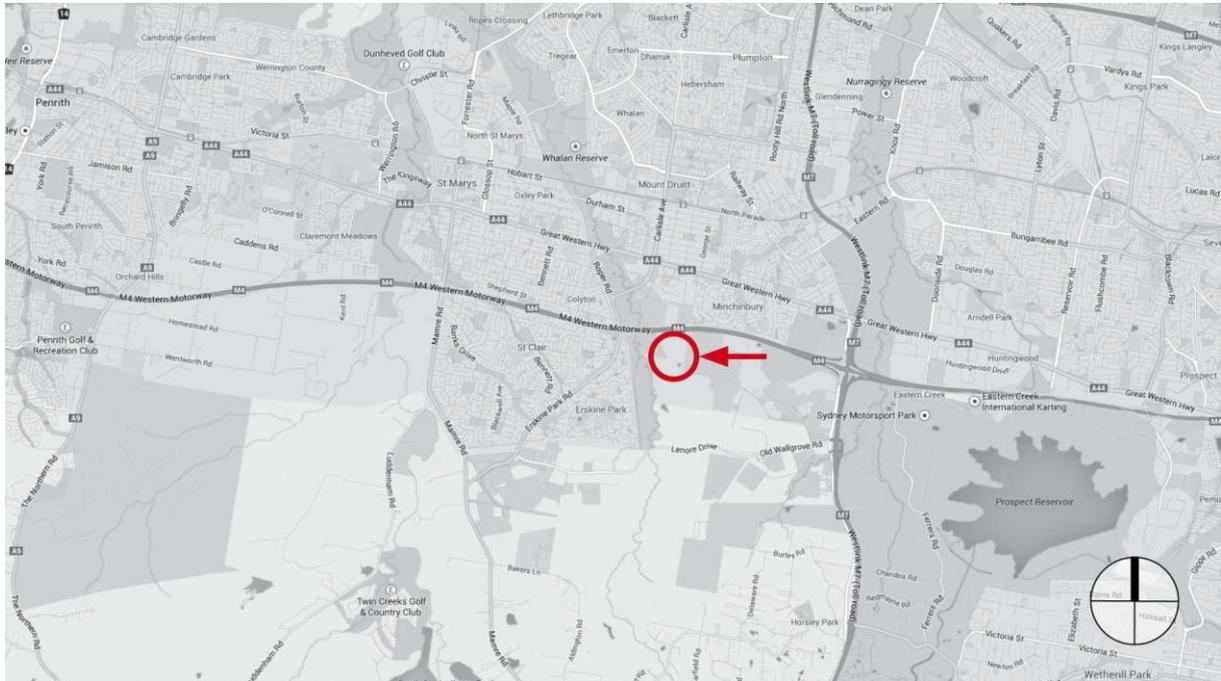


Figure 1.1 Study area location. (Source: Google Maps)



Figure 1.2 Aerial photograph of the study area. (Source: SIX Maps, with GML overlay)

2.0 Historical Background

2.1 Early Land Grants

The area of Eastern Creek was likely to have been first noted by Europeans during early exploration of the region to the west of Parramatta in the late 1700s. The land was soon in use for cultivation by free settlers, with the government retaining sections of the land for the production of grain and meat in the early years of the colony. In order to provide access to the area, early roads were created including the Windsor Road, and the Great Western Highway in the early 1800s.

Between 1818 and 1920, the area between Prospect and South Creek along the Western Highway was granted to free settlers and ex-convicts, with assistance provided to the latter in the form of tools, seed and stock. The study area is located across a number of these grants. The majority of the study area falls within John Thomas Campbell's 1100 acre grant, bounded by Ropes Creek to the west. The northern section of the study area falls within sections of the 800 acres of land granted to William Cox Junior (Figure 2.1).¹

2.2 The Campbell Estate

The 1100 acre portion of land, in which the majority of the study area lies, was granted to John Thomas Campbell on 17 August 1819.² In 1830 the property was inherited by Reverend Charles Campbell, at which point it was called Mount Philo. It was then sold to Charles Roberts for £430 in 1832. Along with Mount Philo, Roberts went on to acquire a number of other properties in the area including the nearby Wallgrove, which he used for the breeding of racing horses.³

In 1851 Charles Roberts and his wife Margaret mortgaged the property, before selling it in 1856 to repay the mortgage taken out. It was bought by Thomas William Shepherd, David Shepherd and Patrick Lindsay Crawford Shepherd for £2900. The Shepherd brothers combined the land with the Erskine Park Estate on the western side of Ropes Creek and opened a nursery, at which time they renamed it Chatsworth (Figure 2.1). Their father, Thomas Shepherd, had previously opened Darling Nursery on the 28 acres he had been granted in Chippendale, opposite Victoria Park. In 1865 Thomas William Shepherd sold his share of the nursery and the properties he owned before undertaking a career in politics.⁴

As a result of the depression towards the end of the nineteenth century, the nursery business was in decline. This resulted in the acquisition of the seed packaging business by Yates. The property remained in the Shepherd family, with the homestead located near Ropes Creek housing David Shepherd, his wife Jane Sarah and their seven children. Jane also held regular Sunday school classes at the house prior to the construction of the local Presbyterian Church. The house and surrounding outbuildings were then sold on 9 December 1909 to Thomas Baker, when David Shepherd sold his share of the 801 acres of Chatsworth. The remainder of the property was sold in two parcels—of 241 acres and 115 acres—to Frederick Thomas Bigg.⁵ The study area is located within a portion sold to Thomas Baker. It was then sold to a number of owners (listed in Table 2.1) before being further subdivided and later amalgamated to form its current layout.⁶

Table 2.1 Land Owners of the Campbell Estate.

Owner	Date
Thomas Baker	1909
William Thomas Collett Baker and Anon	1934
MSW&D Board	1939
Perpetual Trustee Board	Unknown
William Thomas Collett Baker and IW Wainwright	1955
Burfield Pty Ltd	1955
Ray Fitzpatrick Pty Ltd	1956

2.3 William Cox Junior Estate

On 17 August 1819, William Cox Junior was granted 800 acres of land, bounded by John Thomas Campbell's estate to the south, Ropes Creek to the west, and the Great Western Highway to the north.⁷ A parish map from 1898 shows that the estate was known as Colyton, a name which it gave to a small suburb to the north of the M4 Motorway (Figure 2.1).

In 1823, a newspaper article refers to the use of the land for cattle pasture by Major Druitt, a neighbouring landowner.⁸ It was first subdivided to form the village of Colyton in 1842, with a residential subdivision to the north along the Great Western Road, and the remainder intended for lease in small farms or homesteads (Figure 2.2). In 1845, an advertisement indicates that the land was still undeveloped and illegally used for grazing cattle.

*any person trespassing, or pulling down fencing, or putting any cattle into Colyton, commonly called Cox's Bush; or any cattle found trespassing after this date shall be impounded; or any person or persons not abiding by this notice shall be dealt with according to law.*⁹

Since this time the site has been divided and undergone a number of ownership changes, listed below in Table 2.2.¹⁰

Table 2.2 Land Owners of the Cox Estate.

Owner	Date
David Shepherd	1909
David Lindsay Atkin	1909
William Augustus Smith and Joel Phillips	1909
William Augustus Smith, Sydney Smith, Thomas Richard Smith and Ruby Violet Smith	1910
Ruby Violet Smith and Joel Phillips	1910
Ruby Violet Smith and Joel Phillips	1914
Elizabeth Sarah Baker	1917
Perpetual Trustee Company Ltd and Anon	Unknown
William Thomas Collett Baker	1946
Burfield Pty Ltd	1955
Ray Fitzpatrick Pty Ltd	1959

2.4 Land Use within the Study Area

From documentary sources, it is known that the Chatsworth estate was developed with a farm and some outbuildings to the west of the current study area, close to Ropes Creek. Many of the structures associated with the farm remain standing or are evident in the landscape in this area. During the early period of European settlement, no recorded development took place within the portions of the grants which now encompass the study area, including Campbell's Mount Philos or Cox's Colyton. Some agricultural uses may have taken place, particularly in the southern portions of the lot which were later owned by the Shepherd brothers as they were likely to have been part of their nursery. The road running through the study area and connecting the Chatsworth homestead with Archbold Road was likely created during the mid-1800s to provide access to the farm.

During the mid-twentieth century, a portion of land across the Campbell and Cox estate was affected by the easement of a transmission line to the Sydney West substation in the south. This caused the division of the estates into the irregular lots they currently form. Archbold Road (then Chatsworth Road) was in place by this time. However, the road to the Chatsworth homestead remained unsealed (Figure 2.3). The construction of the M4 Motorway in the 1970s also alienated portions of the Cox estate.

Since the 1950s, a number of these lots which had been subdivided from the larger grants were purchased by Ray Fitzpatrick Pty Ltd¹¹, later known as Ray Fitzpatrick Quarries. Major development by this company commenced before 1956 in the form of excavation of a large open cut mine to the immediate east of the study area. The progressive expansion of the quarrying activity led to the excavation of a portion in the centre of the study area (within Lot 2 DP 1145808) and land use associated with this facility across the site.

2.4.1 Aerial Photography

Analysis of aerial photography from 1947 (Figure 2.4), 1956 (Figure 2.5), 1978 (Figure 2.6) and 1986 (Figure 2.7) provides some indication of land use during the latter half of the twentieth century. Changes to the landscape during this period include:

- A small dam in the northwest corner, visible in 1947, expanded progressively with increased vegetation in that area since 1986.
- The unnamed road off Archbold Road became more defined and regular after 1956.
- A new dam in the far west corner was created by 1978.
- Quarrying activity was expanded into the study area in 1978, and again in 1986.

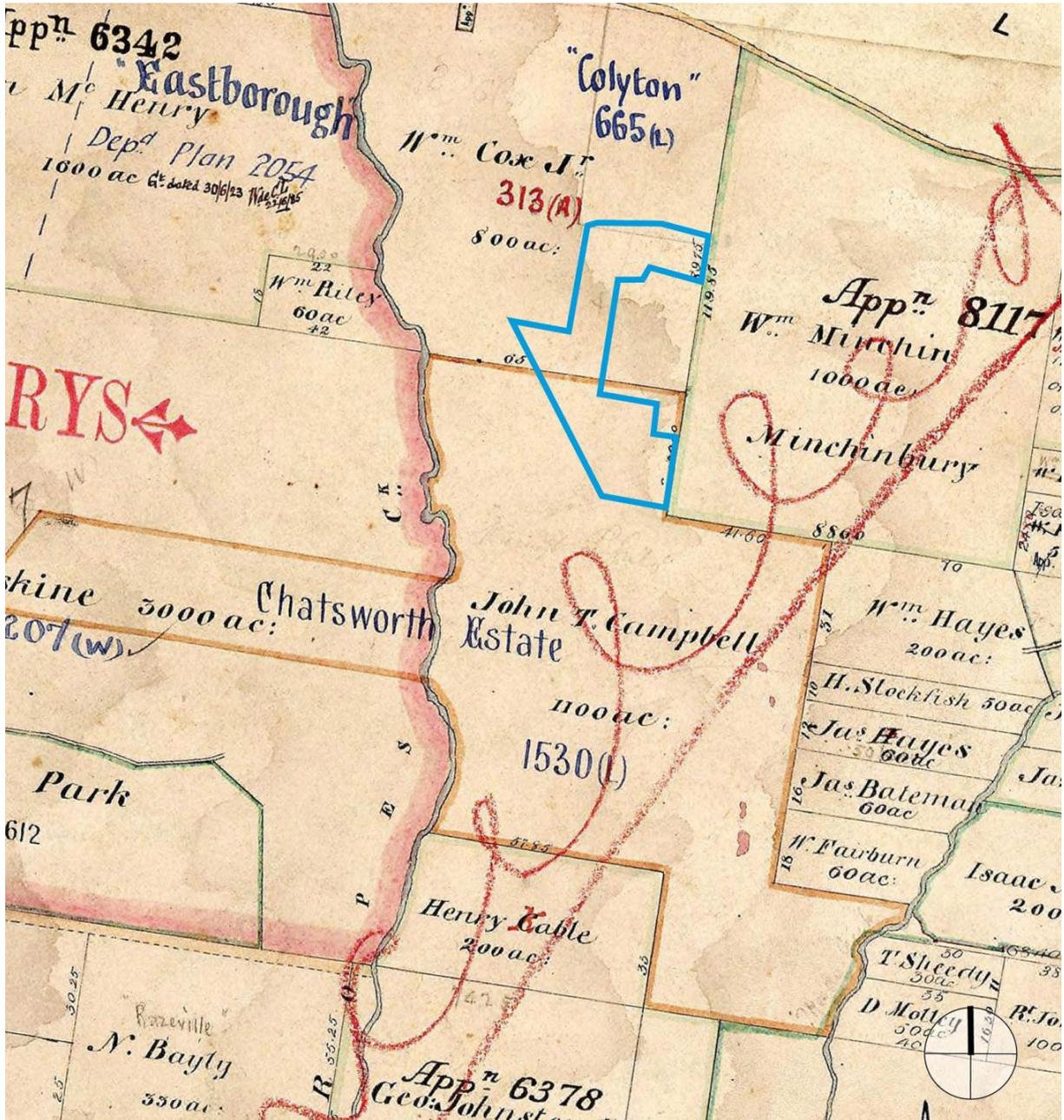


Figure 2.1 1898 Melville Parish Map showing the location of the study area in relation to the first land grants in the area. (Source: Department of Land and Property Information)

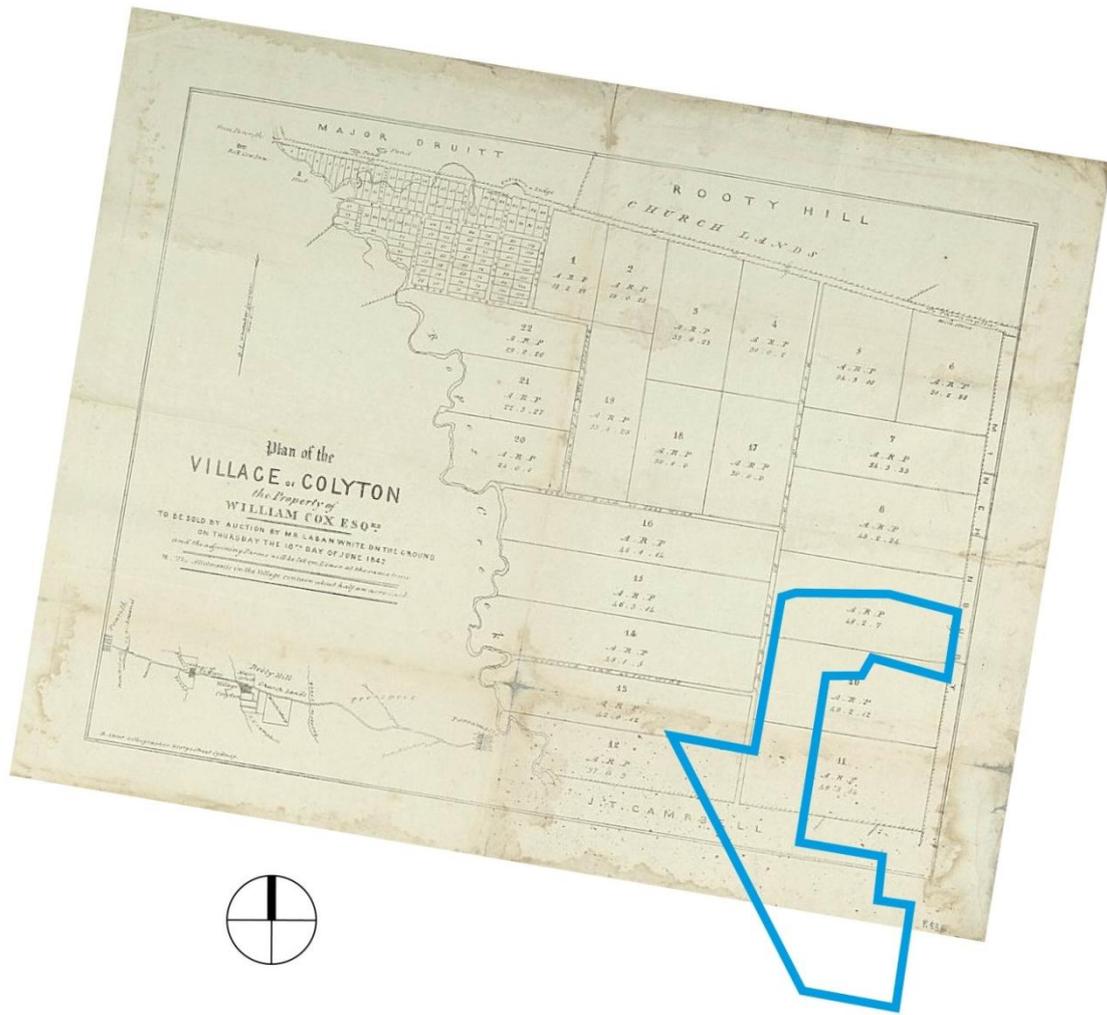


Figure 2.2 Plan of the Village of Colyton, 1842, with the overlay indicating the location of the northern portion of the study area which falls within the Cox estate. (Source: NLA MAP F 836)



Figure 2.3 1938 Melville Parish Map showing the location of the study area in relation to later easements and developments. (Source: Department of Land and Property Information)



Figure 2.4 Aerial photograph of the study area in 1947. (Source: Department of Land and Property Information)



Figure 2.5 Aerial photograph of the study area in 1956. (Source: Department of Land and Property Information)



Figure 2.6 Aerial photograph of the study area in 1978. (Source: Department of Land and Property Information)



Figure 2.7 Aerial photograph of the study area in 1986. (Source: Department of Land and Property Information)

2.5 Endnotes

¹ Nicolaidis, G 2000, Eastern Creek and Land Settlers, Blacktown City Council, Blacktown, p 16.

² Certificate of Title Vol.13548 Fol.70

³ Nicolaidis, G 2000, Eastern Creek and Land Settlers, Blacktown City Council, Blacktown, p 27.

⁴ Nicolaidis, G 2000, Eastern Creek and Land Settlers, Blacktown City Council, Blacktown, pp 44–46.

⁵ Nicolaidis, G 2000, Eastern Creek and Land Settlers, Blacktown City Council, Blacktown, p 47.

⁶ Primary Application 52819.

⁷ Certificate of Title Vol. 13544 Fol.125.

⁸ Sydney Gazette and New South Wales Advertiser, 6 March, 1923.

⁹ Sydney Morning Herald, 25 March, 1845.

¹⁰ Primary Application 52818.

¹¹ Certificate of Title Vol.13544 Fol.125, Vol.13548 Fol.70, Vol.13507 Fol.223.

3.0 Archaeological Potential

3.1 Introduction

This section discusses the physical condition of the study area and the nature and extent of its potential historical archaeological resource. The archaeological potential of the study area has been evaluated through consideration of the observed physical evidence and the historical information contained in Section 2 (related to the occupation and development of the land). Analysis of historical and current documentation for evidence of activities or events which have potentially disturbed archaeological remains has been carried out.

The term 'archaeological potential' is defined as the likelihood that a study area may contain physical evidence related to an earlier phase of occupation, activity or development. This term is differentiated from 'archaeological significance' and 'archaeological research potential', which are more subjective statements regarding the value of the archaeological resource.

3.2 Site Analysis

A physical inspection of the study area has not been undertaken as part of this assessment. Inspection of aerial photography has been utilised in order to gain an understanding of the current conditions of the study area and locations of former ground disturbance. This analysis was further informed by site plans, historic maps and photographs of the site. Based on this, the study area can be classified into three broad regions according to ground surfaces and coverage, the location of waterways, and evidence of disturbance. The following conclusions were drawn:

- The study area slopes from the north to the south.
- All locations within the study area exhibit varying levels of disturbance from the creation of vehicle tracks.
- The study area consists of three broad regions: heavily disturbed and cleared for use associated with the Wallgrove quarry at the centre and northeast corner of the site; wooded areas with grass cover in the northwest and southeast corners of the study area; and open grassed areas covering the southern portion of the study area.
- The northeast portion of the site is separated from the M4 Motorway by a wooded embankment, and from the northwest corner by a fence. Some plantings remain along the fence line with the remainder of this area having been cleared of topsoil between 2009 and 2011. A small body of water is located along the fence line.
- The central portion of the site is bounded to the west by Archbold Road. It features a system of roads associated with the current Dial a Dump Industries building located on the adjacent lot, water retention ponds, and open areas of cleared and graded land. The remaining central portion of the area is currently grassed; however, it has been cleared of vegetation at various times. The level of disturbance in this area is not apparent.
- The northwest corner is separated from the M4 Motorway by a wooded embankment and is bounded to the west by Archbold Road. With the exception of some unsealed vehicle tracks, the area has significant grass coverage and is moderately wooded. No significant changes to ground levels are evident in this area.

- The southeast corner lies across the boundary of Lots 2 and 3, with no physically defined boundary to the quarry to the east. The area lies to the north of the first order creek running to Ropes Creek in the west. It has significant grass coverage and is moderately wooded. No significant changes to ground levels are evident in this area.
- The southern part of the study area is defined by the transmission line easement to the east, a fence line to the south, and the quarry and unmarked boundaries to the north. It consists of open grassed land with sporadic trees. A number of unsealed vehicle tracks have been created across the area, which is also bisected by Archbold Road and an unnamed road extending to the southwest. The first order creek which runs across the southern end of the study area has been graded with the natural ground levels now heavily impacted. A natural drainage line from Archbold Road has been accentuated to create a dam in the western side of the study area.

3.3 Assessment of Archaeological Potential

Archaeological potential refers to the level of possibility that physical evidence of past historical phases will survive on a site. It is an assessment made by interpreting the results of historical analysis and the extent of previous physical disturbance at a site to determine the likelihood of historical archaeological remains to survive.

Section 3.3.1 identifies the four main phases of historical activity within the study area and characterises the types of archaeological evidence that would be present at the site. The impacts of later phases on the potential archaeological remains of previous phases have also been identified in order to establish the likelihood of archaeological evidence to survive.

3.3.1 Historical Development and Impacts

As outlined in Section 2, the site has been subject to four phases of historical development which are generally applicable across the whole study area:

- Phase 1: Early History (1819–1856)
- Phase 2: The Shepherds (1856–1909)
- Phase 3: Early Twentieth Century (1909–1954)
- Phase 4: Quarrying and Industrial Use (1955–Present)

Phase 1: Early History (1819–1856)

Phase 1 (1819–1856) is related to the early land grants made to John Thomas Campbell and William Cox Junior. No development is known and/or documented to have taken place within the study area during this period. If the area had any undocumented uses during this period, the physical evidence is likely to have been associated with pastoral or agricultural pursuits such as land clearing, the construction of timber fencing, or other incidental remains of unrecorded elements or activities. Archaeological remains related to this phase may include fragmentary evidence of postholes from timber fencing, or evidence of landscape modification. Any such evidence, if it does exist, is likely to be ephemeral in nature. The location is not possible to predict due to the lack of documentary evidence for any site based activities during this time.

Phase 2: The Shepherds (1856–1909)

Phase 2 (1856–1909) is associated with the Shepherd brothers and the Chatsworth Nursery. No development within the study area is known to have taken place during this phase; however, the southern portion formed part of the Chatsworth Nursery and some activities related to this use may have taken place for which physical evidence remains. These activities are likely to have had some impact on the remains of Phase 1. The physical evidence related to this phase may include landscape modification, remnant evidence of farming terraces, trenches and introduced fill for the cultivation of plants, or archaeobotanical evidence indicating the types of plants propagated at the site. Remains of these features would be largely ephemeral and fragmentary in nature and are not evidenced in any historical records.

Phase 3: Early Twentieth Century (1909–1954)

During Phase 3 (1909–1954), large lots of the nineteenth-century grants were divided and sold. There is no historically documented land usage for this phase; however, ongoing agricultural use of the land similar to Phases 1 and 2 is probable. Property boundaries were also likely to have been altered. This phase may include physical evidence related to agriculture, as described for Phases 1 and 2, as well as alterations to boundaries including the removal and replacement of fence lines.

Phase 4: Quarrying and Industrial Use (1955–Present)

Phase 4 (1955–Present) is related to the quarrying activity at the site, which began with the purchasing of the land by Ray Fitzpatrick in 1955. The study area was not actively quarried until 1978; however, it is likely that land use was associated with these activities, including access roads and structures. Physical evidence for this phase is visible on the landscape with the open cut mine remaining on part of the study area. Ongoing development of the site during this phase has seen the replacement of earlier structures with further quarrying or new structures; a series of irregular unsealed roads were also created to connect the site to the M4 in the north, and through the southern portion of the site to the unnamed creek. Water detention pits have also been created or expanded in the study area. This activity has involved land clearance and removal of soil profiles in some sections of the site which has impacted on the potential for archaeological evidence of earlier phases to remain on the site.

3.3.2 Summary of Archaeological Potential

The study area has been subject to a number of disturbances since European settlement of the area which have impacted on the creation of historical archaeological remains, and the likelihood for this evidence to remain. Analysis of these events allows for an informed judgement to be made regarding the extent of any potential archaeological resources remaining on site, and thus the establishment of archaeological potential.

Phases 1 to 3 likely had similar levels of impact on the landscape, related to land clearance and the creation of areas for agricultural use. Each successive phase is likely to have impacted on the evidence of activity during the previous phase. Phase 4 had the most impact on any archaeological potential remaining from the preceding phases, due to the excavation of areas for quarrying and the construction of infrastructure.

The study area is therefore divided into three areas, as depicted in Figure 3.1:

- Areas where there is no known historical activity and areas which are not likely to have been used in any phase of the study area's history retain a high degree of natural vegetation and

exhibit minimal disturbance. These areas have been subject to little development activity in all phases and therefore have little or no historical archaeological potential.

- Areas where historical activity has taken place and areas which have been partially disturbed in later phases have low historical archaeological potential.
- Areas where historical activity has taken place and areas which have been subject to high levels of disturbance in Phase 4 have no historical archaeological potential.



Figure 3.1 Levels of disturbance across the subject site. (Source: SIX Maps with GML overlay)

4.0 Significance Assessment

4.1 Introduction

Archaeological significance refers to the heritage significance of known or potential archaeological remains. As with other types of heritage items, archaeological remains should be managed in accordance with their significance. In situations where development is proposed, this can influence the degree of impact that may be acceptable or the level of investigation and recording that may be required.

Assessing the heritage value of archaeological remains is made difficult by the fact that their extent and nature is often unknown. It is therefore necessary to make judgements based on expected or potential attributes.

The assessment of significance of historical archaeological sites requires a specialised framework for consideration. The most widely used framework is that developed by Bickford and Sullivan in 1984¹ and comprises three key questions which can be used as a guide for assessing the significance of an archaeological site:

- Can the site contribute knowledge that no other site can?
- Can the site contribute knowledge that no other resource can?
- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

The Heritage Branch of the OEH (formerly the Department of Planning) issued a new set of guidelines in 2009 in *Assessing Significance for Historical Archaeological Sites and 'Relics'*. These guidelines call for broader consideration of multiple values of archaeological sites beyond their research potential. The following assessment of archaeological significance for the study area follows these guidelines, and is augmented with answers to the above questions posed by Bickford and Sullivan.

4.2 NSW Heritage Criteria for Assessing Significance Related to Archaeological Sites and Relics

Archaeological Research Potential (NSW Heritage Criterion E)

No known physical development has occurred on the site, and the likelihood that local or state significant historical archaeological features are present is low to nil. If any physical remains survive, they are likely to provide only ephemeral evidence of unrecorded activities with low research potential—they are unlikely to meet the threshold for definition as a relic of Local or State significance. If more substantial evidence related to Phases 1 to 3 of occupation of the site was unexpectedly found—such as structural remains or an artefact bearing deposit—then its research potential may be high.

Association with Individuals, Events or Groups of Historical Importance (NSW Heritage Criteria A, B & D)

Any historical archaeological remains dating to Phase 1 (1819–1856) are likely to be associated with John Thomas Campbell and William Cox Junior, two figures with some historical importance to the local area as early settlers.

Physical evidence of Chatsworth Nursery dating to Phase 2 (1856–1909) would be associated with the Shepherd brothers. They were a well-known family for their nursery in Chippendale with numerous streets still named after them today, including Thomas, Ivy and Rose Streets.

Other phases of the study area's history are unlikely to have associations with individuals, events or groups of historical importance.

The study area's social value to the local community has not been assessed as part of this study.

Aesthetic or Technical Significance (NSW Heritage Criterion C)

It is unlikely that archaeological relics that can demonstrate aesthetic or technical significance will be found.

Ability to Demonstrate the Past through Archaeological Remains (NSW Heritage Criteria A, C, F & G)

The potential for the study area to contain archaeological evidence associated with any phase of the site's history is low. Whatever evidence is likely to remain would be ephemeral in nature and its limited research potential would mean that it is unlikely to be considered significant in terms of this criterion.

4.3 Bickford and Sullivan's Questions

Can the site contribute knowledge that no other site can?

The potential for the study area to contribute knowledge about the known phases of historical use—early land grants, nineteenth-century commercial nurseries, and twentieth-century quarries—that is not available from other sites is low. Given that evidence suggests that the study area was unlikely to have been developed during Phases 1 to 3, it is unlikely that any significant archaeological features are present. If any physical remains survive, they would be incidental and ephemeral evidence of unrecorded activities with low potential to contribute knowledge that no other site can. If, however, unexpected remains of a substantial nature and extent (such as structural remains or an artefact bearing deposit) were to be discovered, their research potential may be high.

Physical development associated with Phase 4 has been largely destructive, consisting of quarrying activity. The potential for archaeological remains dating from Phase 4 (1896–1991) to contribute knowledge that no other site can is low to nil.

Can the site contribute knowledge that no other resource can?

Generally, the potential for the site to contribute knowledge that is not available from other sources is low to nil.

The likely ephemeral nature of any possible archaeological remains dating to Phases 1 to 3, and the disturbance experienced across the site since 1955 means that the site's ability to contribute knowledge about these phases is low to nil. The unexpected discovery of an intact archaeological resource—such as structural remains or an artefact bearing deposit—would, however, significantly contribute to our understanding of the site's use from 1819–1955, as there are currently no records documenting activities that occurred on the site during this time period.

Archaeological remains of Ray Fitzpatrick's ownership and subsequent quarrying during Phase 4 (1896–1991) are unlikely to offer information on the history of the study area that is not already available from historical documents, maps and photographs.

Incidental remains of unrecorded activities from Phases 1 to 4 (1803–1991) may provide general evidence about the study area not available elsewhere, but the ability for this information to improve our understanding of the site is low to nil.

Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research potential?

Historical archaeological features and deposits that may survive within the study area are likely to be minimal and ephemeral in nature, and therefore unable to answer questions relating to the study area's phase of occupation that are not ascertainable from other historical resources. In the unlikely event that substantial evidence of Phases 1 to 3 (1803–1862)—such as structural remains or an artefact bearing deposit—survives intact, this may provide previously unknown details about the use of the study area, particularly from Phase 3 (1909–1954).

Further, it is unlikely that any historical archaeological remains from the study area would contribute new evidence towards our general understanding of the broad historical site types, such as early land grants or late nineteenth-century nurseries and agriculture.

Therefore, it is unlikely that the study area has the ability to significantly contribute to any of the major research questions relating to Australia's history.

4.4 Statement of Significance

Intact historical archaeological remains present within the study area related to the early land use phase (1819–1856), including land clearing, agricultural practices and associated activities, would be of significance for their ability to contribute knowledge that is not documented elsewhere about the earliest phase of non-Aboriginal development of the area.

Historical archaeological remains related to the site's use as Chatsworth Nursery (1862–1894), including landscape modifications, plantings and previously unrecorded structures would be of significance because of their association with the Shepherd brothers, who ran a number of nurseries in Sydney during this period.

Any substantial intact historical archaeological remains, such as structural remains present at this site related to Phases 2 and 3, would also have significance for their ability to contribute previously unknown information on land use at the site.

Other remnant archaeological remains would not be likely to meet the threshold for Local or State significance.

The entire potential historical archaeological resource at the site has low research potential, primarily due to its predicted ephemeral and fragmentary nature, combined with the lack of development history. Furthermore, the site lacks features such as wells, privies and underfloor deposits which may yield substantial artefact bearing deposits that could contribute knowledge not ascertainable from the documentary record.

4.5 Endnotes

- ¹ Bickford, A and Sullivan S 1984, 'Assessing the Research Significance of Historic Sites', in Sullivan, S and Bowdler S (eds), *Site Surveys and Significance Assessment in Australian Archaeology* (proceedings of the 1981 Springwood Conference on Australian Prehistory), Department of Prehistory, Research School of Pacific Studies, the Australian National University, Canberra.

5.0 Archaeological Impact Assessment

5.1 Description of the Proposal

The current proposal is for construction of the Energy from Waste (EFW) electricity generation plant at the southern end of the study area (Figure 5.1). The facility will operate in conjunction with the adjoining Genesis Material Processing Centre (MPC) and Waste Transfer Station (WTS), using unsalvageable and economic residue waste for thermal conversion and the consequential generation of electrical power. The two facilities will be connected by a covered electrically powered conveyor for the transfer of waste, which will also be transported to the EFW facility by truck. A plan of the development is shown in Figure 5.1.

The proposed works will, in addition to the Energy from Waste Electricity Generation Facility, include the adoption of a plan of subdivision and the following ancillary works:

- Earthworks associated with the balance of the site;
- Internal roadways;
- Provision of a direct underpass connection (Precast Arch and Conveyor Culvert) between TNG Facility and the Genesis Xero Waste Facility;
- Staff amenities and ablutions;
- Staff carparking facilities;
- Water detention and treatment basins;
- Services (Sewerage, Water Supply, Communications, Power Supply).

Further to the above physical works associated with the proposed Energy from Waste Facility, this application seeks approval for the subdivision Lot 1, 2 and 3 in DP 1145805 in order to create a separate lot of 10,000 m² for the Transgrid Switching or Substation and additional lots to allow for future development of land not associated with the Energy from Waste Facility and the Genesis Xero Material Processing Centre.

5.2 Potential Archaeological Impacts

The proposed development would involve bulk and shallow excavation to balance the existing slope across the study area, which would disturb and or remove historical archaeological remains that do not meet the threshold of Local or State significant relics. Excavation will be required for the footings of the main building and water detention basins. Some further excavation of the surrounding area will be required for the construction of roads, car parking and the installation of services. These excavation works would remove any potential archaeological remains within the proposed impact area. However, as these remains would not meet the threshold for classification as 'relics' (due to a lack of significance), these works are not considered to be an impact on relics.

The general arrangement of batters and laydown pads has changed between plan for Option 7, issued 16 April, 2014 and the final plan issued 12 June, 2014. These changes have in layout are primarily associated with periphery of the site. These final changes do not appear to increase the extent of proposed ground impact, with reference to the level of potential for historical archaeology.

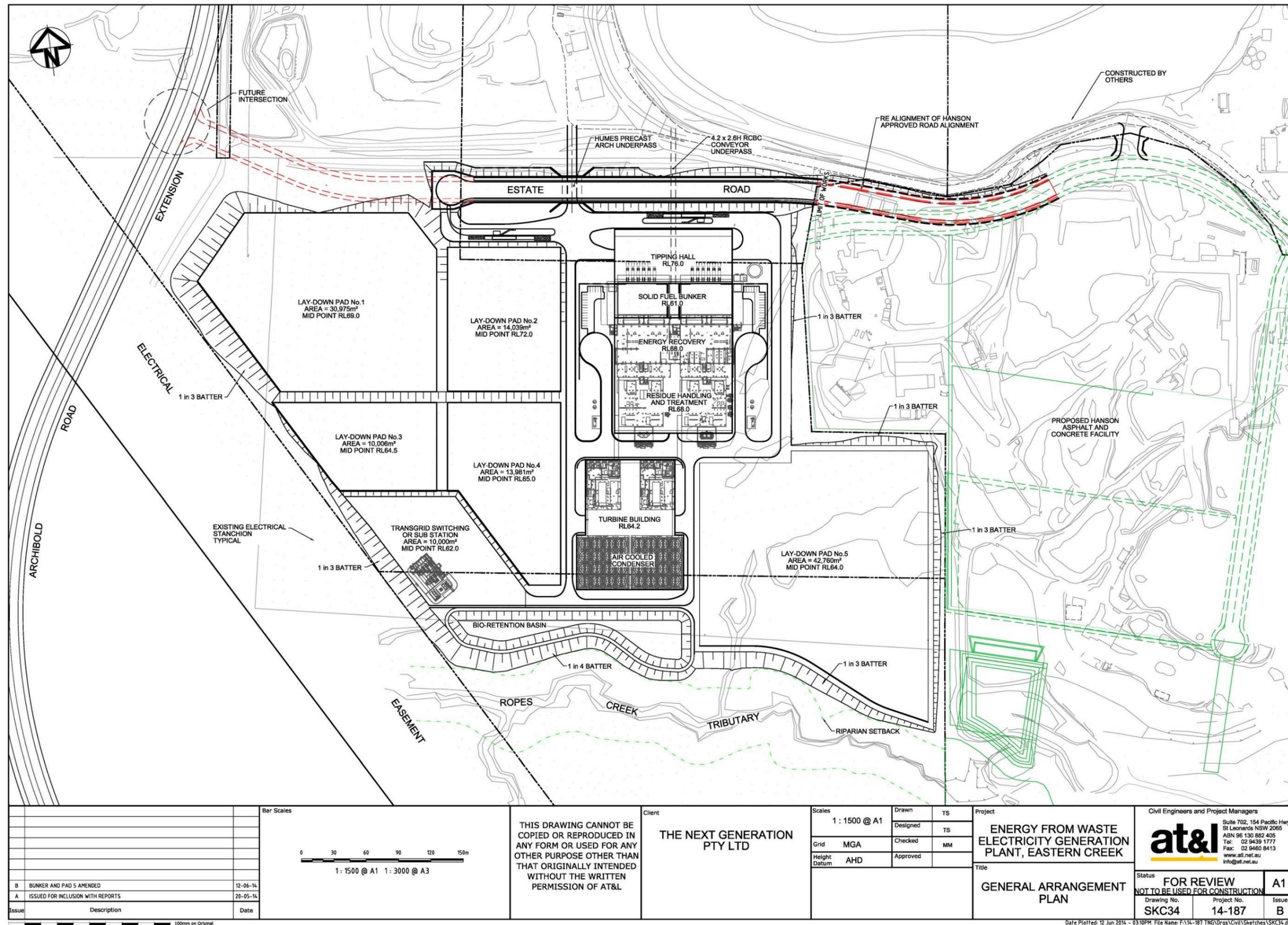


Figure 5.1 Current plan of the proposed EFW facility. (Source: Urbis)

6.0 Conclusions and Recommendations

6.1 Conclusions

- The study area has been characterised by four main phases of historical development as follows:
 - Phase 1: Early History (1819–1856)
 - Phase 2: The Shepherds (1856–1909)
 - Phase 3: Early Twentieth Century (1909–1954)
 - Phase 4: Quarrying and Industrial Use (1955–Present)
- Parts of the study area have been subject to major disturbances associated with quarrying activity to the east of the study area. Other parts of the study area have no known historical use and are largely undisturbed by any documented or visible development activities.
- The potential historical archaeological resource is expected to have low research potential and is not considered to meet the criteria for Local or State significant relics, as defined by the Heritage Act.
- The proposed redevelopment of the study area involves construction of the Energy from Waste (EFW) electricity generation plant and ancillary infrastructure. The excavation and ground disturbance works associated with the proposed development would remove any potential archaeological remains within the proposed impact area.
- These works are not considered likely to impact on relics of Local or State significance, as the potential historical archaeological resource that is likely to exist on study area (Figure 3.1) does not meet the threshold for a relic due to a lack of significance.

6.2 Recommendations

- Given the low potential for historical archaeological remains of low significance to be present within the study area, further works are not required.
- In the event that unexpected archaeological remains not identified by this report are discovered at the study area, all works in the affected area should cease and the OEH should be notified, in accordance with Section 146 of the Heritage Act.
- All contractors involved in the development should receive a Heritage Induction outlining the protocol regarding the identification of unexpected archaeological remains, and their obligations under the Heritage Act and the *National Parks and Wildlife Act (NSW)*.